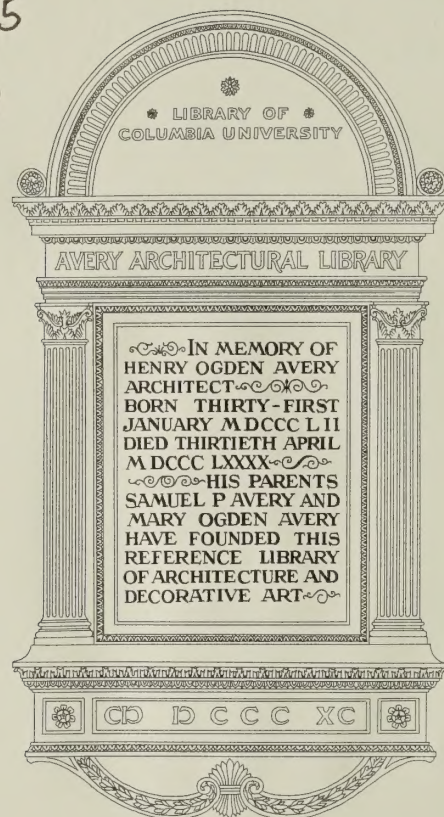


*The*  
Greenhouse Beautiful

*Philip J. Foley*

AT  
3075  
F69  
1918

Classics



787518







# *The* Greenhouse Beautiful

PHILIP J. FOLEY



CHICAGO  
The Foley Greenhouse Manufacturing Company  
1918

*Copyright 1918 by The Foley Greenhouse Manufacturing Company*





"And North and South and East and West  
The pride of every zone,  
The fairest, rarest, and the best  
May all be made our own."

JOHN GREENLEAF WHITTIER.

*(Hymn to American Horticultural Society, 1882.)*



# The Greenhouse Beautiful

A MODERN GREENHOUSE adds more class and distinction to a home than any other improvement. Put a beautiful structure, like any of those shown on the following pages, into a country estate or on the grounds of a city house, and the effect will be that of adding a rare gem to a piece of jewelry.

No matter how simple, nor how magnificent, there is an intangible something about the atmosphere of a place possessing a greenhouse that is missing from its neighbors. It seems to stand above and apart from the common assemblage.

Perhaps this is due to the unconscious suggestion that the owner can afford to enjoy the beauties of nature in his own way; perhaps it is the idea of being able to overcome seasons and climate and keep a touch of summer all the year round.

To the owner of a greenhouse there is the pleasure and satisfaction of being able to have the most glorious blooms, or delicious fruits and vegetables at any time of the year. And the sheer joy of mingling with the beauties of nature, of wandering among the flowers—the unequaled pleasure of nurturing some favorite little rare plant and watching it grow and then bud and bloom—is common to the owner of a “Greenhouse Beautiful.”

It is long since that the greenhouse was used only for keeping of plants through the winter, ready for the summer's garden. Then the construction was heavy and the lines far from pleasing. For that reason the “hot house” was usually placed in some out of the way location and screened from the house by bushes and trees.

Today the greenhouse is made a part of the landscape—often the dominant feature around which the entire plan of the grounds is laid out. A striking example of this are the houses shown on page six; they were erected before the home or grounds were completed.

This change has been largely due to the great improvement in the forms of construction that have been developed in the last ten years. Wood rafters and supports with their light-obscuring bulkiness, have given away to slender steel construction that is easily adaptable to any form.

The early steel frame houses followed the lines of the old wooden construction; that is, the glass walls and the straight glass roof with the gutter in the usual place—the edge of the roof slope. This is known as the “straight eave,” and its use today is confined largely to commercial houses. Then, as we have developed it, came the present form of curving the steel supports at the eaves and bending the glass to correspond. Thus there is no line at the eave; nothing but a continuous sweep of glass, unbroken, to the foundation wall. With the elaboration of this later form, the “curved eave” type, came the beautification of the greenhouse and its removal to a place of honor in the garden.

A variation of the curved eave house is found in the “curvilinear” construction. In this the rafters and the glass are bent to a curve of changing radii so that the roof and sides, of which there are practically no straight portions, merge together in a rounding sweep of glass. For palm houses and aquatic rooms this type is desirable, not only



because of the surpassing beauty of its lines, but also for the extra headroom it allows tall plants.

One of the greatest elements that has contributed to the popularity of the conservatory is the development of the heating systems. As these are now designed and constructed it is possible to maintain exactly the desired temperature in any compartment of a conservatory, without unduly heating any other. In fact, as we install them, the heating plants in Foley greenhouses will keep the temperature absolutely to that required at all times.

In the selection of a greenhouse these two important elements must be considered:—the type of construction, including the perfection of design and the skill of fitting and erection; and the efficiency and economy of the heating installation. With both of these above question the owner will have a house that will be a source of continuous pleasure, pride and satisfaction.

In the designing of Foley Greenhouses we work on the principle of expressing the individual tastes and ideals of the owner and his architect. We have developed a system of designing that is at once economical, yet permitting the greatest freedom in the selection of shapes, sizes and types to harmonize with the setting as well as to suit the uses to which the building will be put.

This harmony of form, setting and use has earned for the Foley Greenhouse the title—as expressed by one of our fair customers—of the “Greenhouse Beautiful.”

And the construction details show the same scrupulous care and attention as the selection of the style and type of house.

Just as an example—the Foley One-piece Combination Sill and Double Gutter, completely caps the masonry wall. One gutter outside the glass for rain and snow and one inside to catch the condensation, both with proper drain connections. This prevents the moisture from running down over the foundation wall, causing discoloration, mould and a lodging place for vermin. This sill is found only in Foley construction.

So it is with all the fine points in the construction; just a little better—just a little more thought given to the design—just a little more care given to the construction and fitting—just a little more skill in the erection—just a little more skill, experience and thoroughness put into the plan and installation of the heating system. The result is that the Foley Greenhouse is, as far as human agency, working with the finest materials will allow, without a fault.

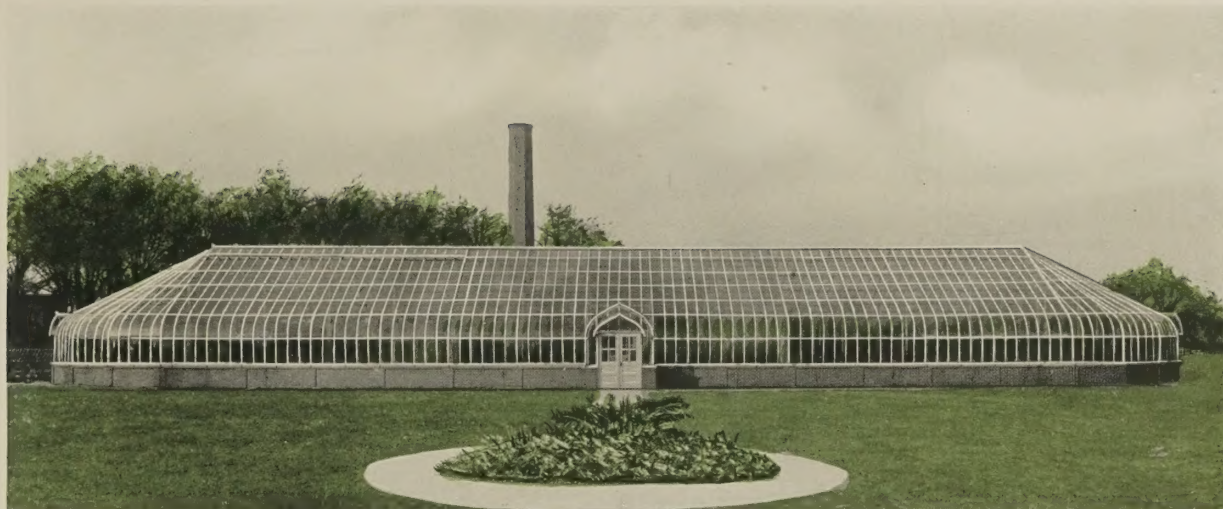
Foley Greenhouses are designed, fabricated and fitted by our own organization in our own plant. Our skilled mechanics are sent to all parts of the country to handle the erection, or we supply a superintendent only if local labor is preferred.

Thus we are able to give our guaranty of satisfaction, secure in the knowledge that the building itself will be our best recommendation and the praises of satisfied owners will be our best sales arguments. We refer, in this spirit, to the owners of any of the houses which are illustrated in this book.

---

THE FOLEY GREENHOUSE MANUFACTURING COMPANY  
SOUTH SPAULDING AVENUE AND WEST THIRTY-FIRST STREET, CHICAGO





## Foley Greenhouse of Mr. J. W. Bettendorf

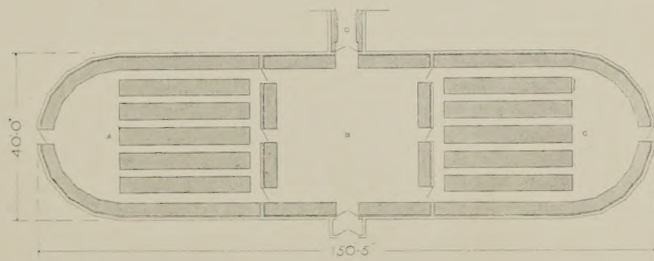
Bettendorf, Iowa

THIS handsome curved eave type house was designed and erected by us for Mr. J. W. Bettendorf on the grounds of his magnificent home at Bettendorf, Iowa.

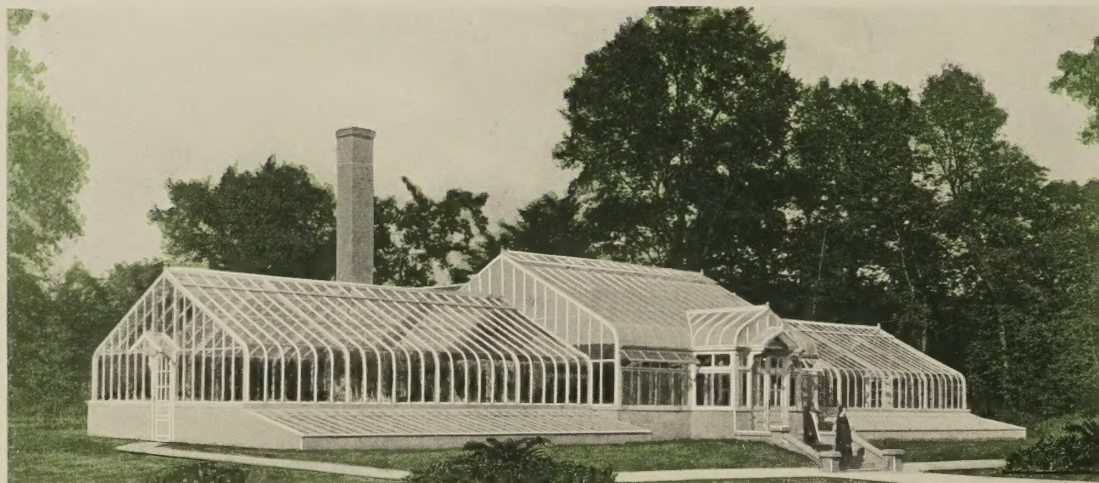
Without doubt this is one of the finest greenhouses in the west and its setting on the top of the river-bank bluff is ideal. For miles in both directions the green clad hills of the Mississippi River valley spread out before it.

The house is divided into three compartments, the middle one of which, 40 feet square, is used for palms. The octagonal ends of this greenhouse give it a particularly pleasing skyline.

Rising majestically from the top of the bluff, this gem with its vitrified red brick foundation and service building, makes a fitting crown to the wonderfully attractive estate.







Foley Greenhouse of Mr. R. H. McElwee  
Lake Bluff, Illinois

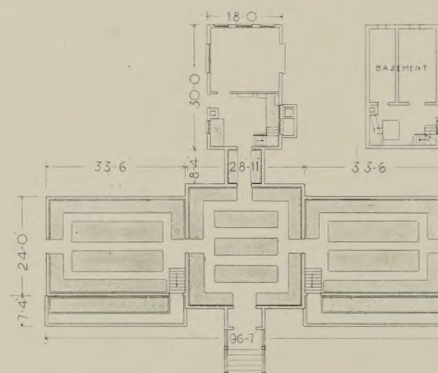
THIS ideal group was designed and built by us for Mr. R. H. McElwee at his new home in Lake Bluff. Probably this is one of the most practical layouts that can be erected, for in a comparatively small compass a very large number of plants and vegetables can be cared for.

The central palm house, roofed with ground glass is flanked by two wing houses. In front of these are located the pit houses, below grade of the main houses. These have head-room of seven feet and are heated. Beneath the benches in the pit houses is space for mushroom cultivation.

The service building is connected to the palm house by a glass passage that is used for propagating. In addition to the usual workroom there is a cool storage room for keeping the outdoor large tub plants, etc., dormant during the winter. The heating plant is in the basement of service building.

For pure artistic beauty of line, for dignity of effect, and for absolute practicability of layout this design is unequaled.

And it is so planned that additions may be made without altering the harmony of the whole scheme.







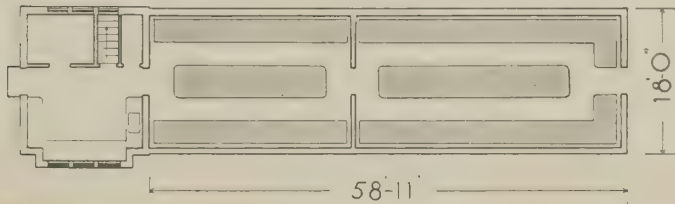
Foley Greenhouse of Mrs. Cyrus H. McCormick  
Lake Forest, Illinois

THIS modern curved eave greenhouse was designed and erected by us for Mrs. Cyrus H. McCormick at her home in Lake Forest, Illinois. The house is divided into two compartments, one of which, roofed with shaded glass, is used for palms and ferns. In the other compartment carnations, chrysanthemums and similar blooming plants are grown.

The heating plant is equipped with thermostatic control that maintains an even temperature throughout the building with little attention. In the service building, besides the

usual workroom with its potting benches, seed cabinets, etc., is an office for the superintendent.

Greenhouse foundation walls are of concrete, veneered with pressed brick to match the other buildings on the grounds.





## Foley Greenhouse of Mr. William Wrigley, Jr.

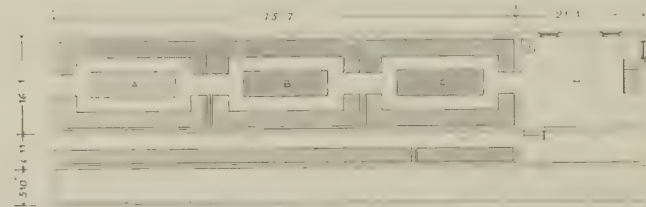
Lake Geneva, Wisconsin

THIS combination curved eave greenhouse, with curved eave leanto was designed and built by us for Mr. Wm. Wrigley, Jr. for use as a vegetable house. But so much better did he find his Foley heating system than that with which his other houses were supplied that he moved his roses to this house. The main house is used as a flower house and the leanto for vegetables.

This leanto is divided into two compartments, in one of which he grows melons and in the other, cucumbers. The frames in the foreground are heated by coils from the main plant.

So thoroughly satisfactory and so economical was the heating plant which we installed in this greenhouse that Mr. Wrigley commissioned us to reconstruct the entire heating system in "Green Gables," his country residence of forty rooms. And following this, his "farm house" and his city garage.

Probably this is better testimony than any claim we could make of the importance of a properly designed heating plant in a greenhouse and the absolute satisfaction to be found in a Foley installation.







## Foley Greenhouse of Mr. Albert C. Elser

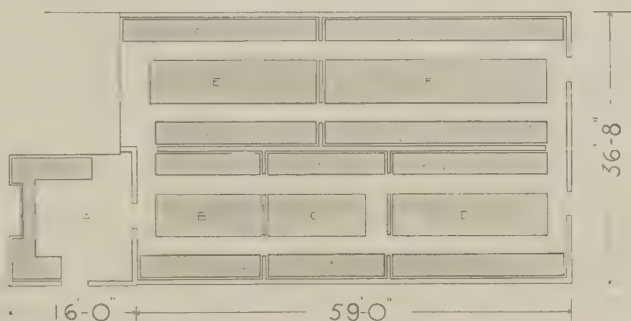
Pine Lake, Hartland, Wisconsin

AN unusually attractive group of two connected growing houses and a cosy curved eave palm house designed and built by us for Mr. Albert C. Elser of Milwaukee at his beautiful summer home on Pine Lake, near Hartland, Wisconsin.

Because of the hilly location these growing houses are terraced, the back one being higher. This obviates, almost entirely, the usual objection to connected houses: that is, the shade that one house casts over the other.

Immediately adjoining the palm house is the Superintendent's cottage; back of the Palm House is the service building. In the basement of this building is the heating plant which cares for this entire group of buildings.

Although the conservatory is located at his summer home, Mr. Elser makes use of his greenhouse the year round, for he keeps his Milwaukee home supplied with flowers, plants and vegetables all through the winter.





## Foley Greenhouse of Major E. S. Moore

Lake Forest, Illinois

THIS range of greenhouses erected by us for Major E. S. Moore at his Lake Forest home illustrates well the point we made in our opening article; that is, that the greenhouse today is often given a place of honor in the laying out of an estate. Major Moore's two houses, are the background for the glorious broad lawns that surround his home.

On the side shown above, the greenhouses crown the delightful formal gardens that are laid out around a pond for wild water fowl.

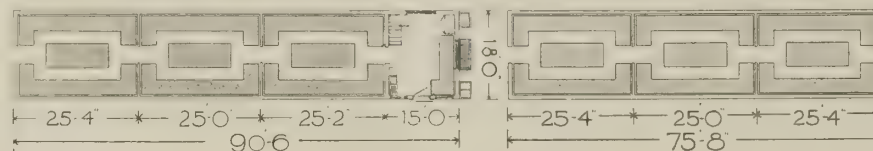
Each of these houses, with the service building in the center, is divided into three compartments. Thus there is

opportunity for the widest range of plants and flowers because of the large number of varying temperatures possible.

Although a great many varieties of flowers are grown here, probably the greatest pride of Major Moore's conservatories is his wonderful collection of orchids.

With the very efficient Foley heating system it is easy to maintain just the temperature desired in each compartment—even to the very particular atmosphere required for the delicate orchids.

As will be seen in the plan the houses are separated, giving a passage from the home to the gardens. Heat is carried across this passage in a conduit.





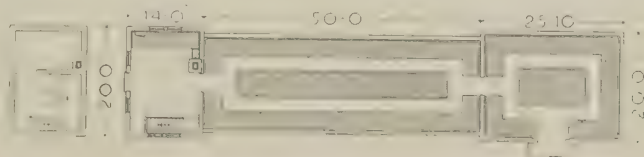


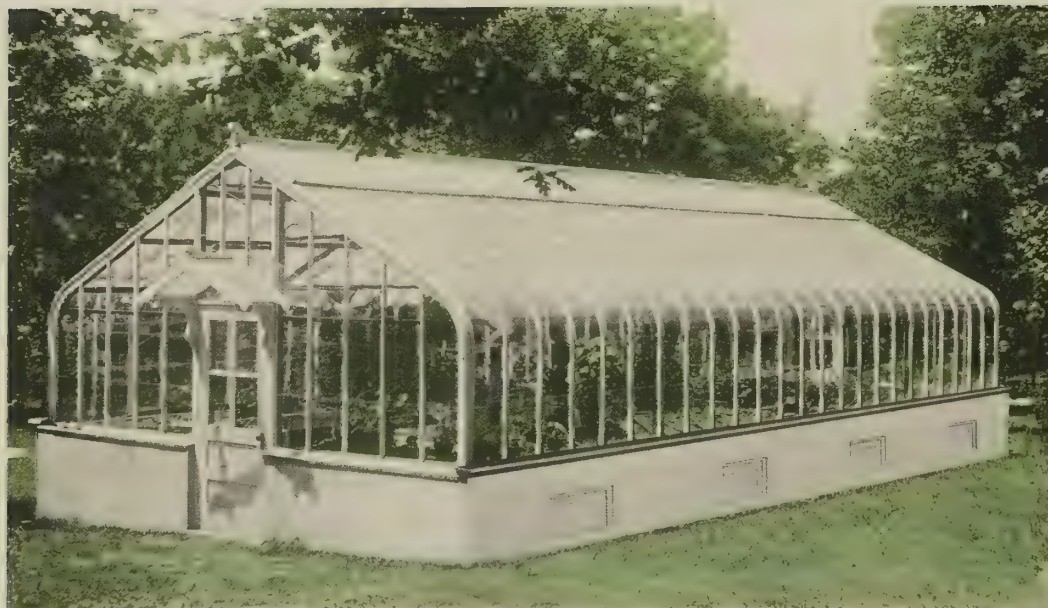
Foley Greenhouse of Mr. C. E. Schaff  
Houston, Texas

THIS conservatory is an excellent example of the curved eave with side sash. In this the gutter is placed just below the curve of the roof and swinging sash ventilators are located below. The general mildness of the climate makes this form very desirable for it permits of direct ventilation onto the plants when the weather allows.

In this delightful little palm house and connected growing house it is possible to propagate tropical plants and to produce blooms that are impossible in the out-of-doors garden, even as far south as this is located. As a matter of fact, there is no part of this country that can produce as fine plants and

flowers out of doors as can be raised under glass. Set in the midst of orange groves, with semi-tropical verdure all around this gem of a greenhouse seems the final touch of beauty to the magnificent grounds.

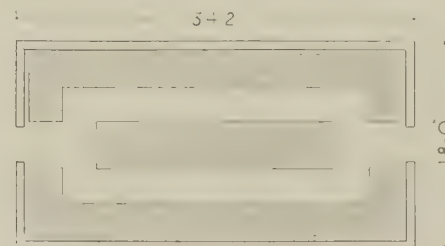




Foley Greenhouse of Mr. E. C. Wharf  
Vincennes, Indiana

THE one striking feature about this little house is the total absence of the usual service building. This gives the house the effect of independence; an attractiveness that is unusual. Many small grounds could easily accommodate such a structure for the heating is carried in conduits from a nearby garage. A house this size could easily be heated from the home heating plant and be placed close enough to the house to have a connecting passage if desired. Even as small a house as this will accommodate a great variety of plants and some vegetables. With a partition in the center different temperatures can be maintained. Mr. Wharf uses his house almost entirely to prepare his bedding plants for his grounds and to keep them during the winter.

This form and size of greenhouse is ideal for the city lot, for it is compact, easily heated and of such size that the owner could care for it alone, if he desired.





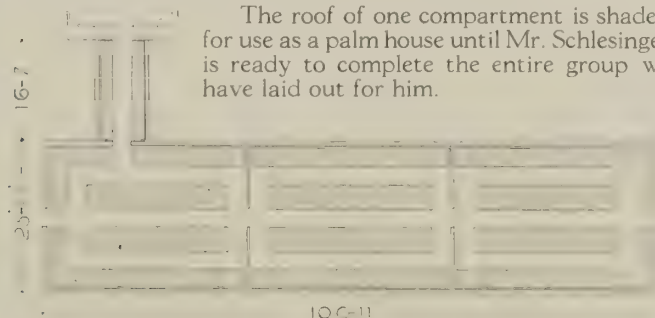


## Foley Greenhouse of Mr. Ferdinand Schlesinger

Milwaukee, Wisconsin

THIS three-compartment, curved eave greenhouse, with its convenient little service building, is particularly attractive because of the absence of the large heating plant with its chimney. In this installation, like that on the opposite page, the heat is brought in conduits from a near-by garage. This is a decided economy, for both buildings are warmed by one fire.

The roof of one compartment is shaded for use as a palm house until Mr. Schlesinger is ready to complete the entire group we have laid out for him.



This plan is often advisable in case a greenhouse is a new venture with an owner. Let him adopt a well developed plan, but erect only a part of the buildings; then as his floral collection and his experience grow he is ready to enlarge his greenhouses to correspond.





## Foley Greenhouse of Mr. L. B. Kuppenheimer

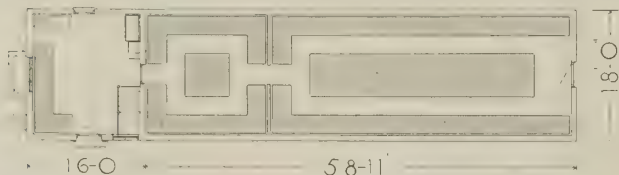
Hubbard Woods, Illinois

THIS greenhouse has all the earmarks of the typical installation that harmonizes and fits into either a country home or a city lot grounds. A single 18-foot wide house of the curved eave type, divided into two compartments and with the service building at the end, meets the demands of many who want an attractive and economical building to raise flowers and plants.

The foundation walls and the entire service building are constructed of reinforced concrete. The service building is roofed with slate to match the other buildings on his grounds.

Mr. Kuppenheimer uses his greenhouse to keep and grow

the many flowers found on the estate in the summer, in addition to the usual collections of winter blooming plants such as "mums," carnations, cyclamen, etc. The loft of the service building, usually devoted only to storage, is finished as a pigeon cote in which squabs are raised for the table.







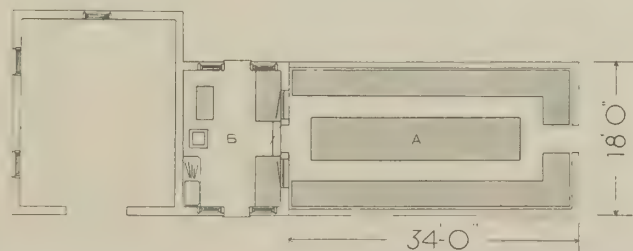
Foley Greenhouse of Mr. James H. Cogswell  
Cleveland, Ohio

THIS little curved eave greenhouse and service building, designed and built by us, nestles right up against the garage so that the heating plant in the service building supplies heat to both the greenhouse and the garage. As natural gas is available in this section the heating plant is equipped for that fuel. The boiler is fitted with thermostatic control that automatically regulates the fuel supply so that the tempera-

ture of the greenhouse is kept at the desired point with a minimum of attention. This thermostatic control can be arranged for any plant, but of course there is not the total absence of work as with natural gas.

This size of greenhouse is ideal for the small place as it houses plants and vegetables to supply the home and table the year round. And it is small enough to permit the owner giving it full care if desired. Mr. Cogswell writes that this is one of the most pleasant duties of the day. This appeals to many who love to work among the flowers, yet feel that they do not want the expense of a gardener during the winter.

While this house is not divided into compartments, part of the roof, next the service building, is shaded and some palms and ferns are kept in this portion.





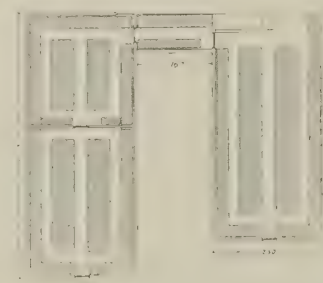
Foley Greenhouse of Mr. W. L. Velie  
Moline, Illinois

**B**OTH the straight eave house at the right and the curved eave house at the left were designed and erected by us. Several years ago we built the straight eave house, and so well satisfied was Mr. Velie that he asked us to complete his range. For the later structure he selected the more modern construction, the curved eave.

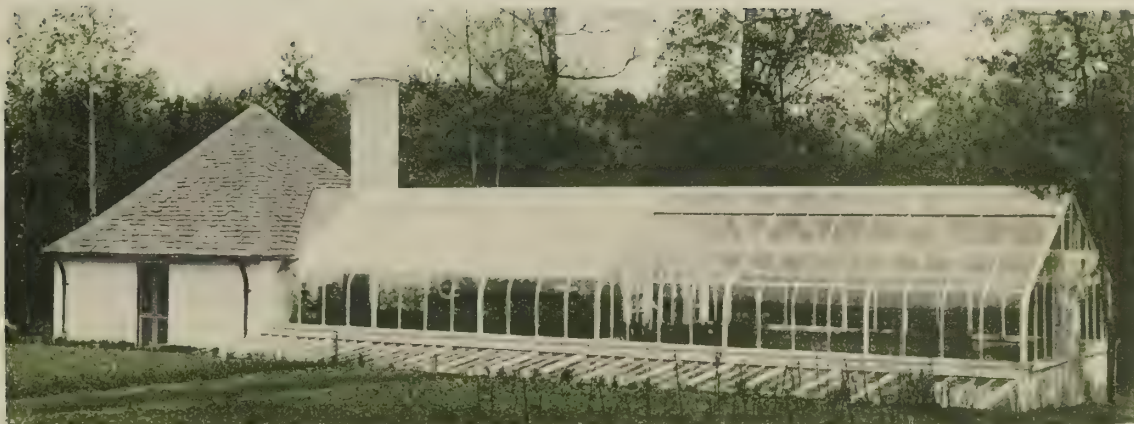
In laying out this new house we separated the buildings to avoid overshadowing and connected them with a leanto house along the side of the garage.

As one house is divided into two compartments, Mr. Velie has, with the leanto, four different temperatures available for a wide variety of plants and flowers. One compartment of the new curved eave house is glazed with ground

glass and is used for palms. In this layout the heat comes from a large central heating plant that supplies all of the buildings on the grounds, including the home, servants' cottage, garage and green-houses. This illustration gives an admirable opportunity to compare the appearance of the curved eave construction with the straight eave, in the same setting.



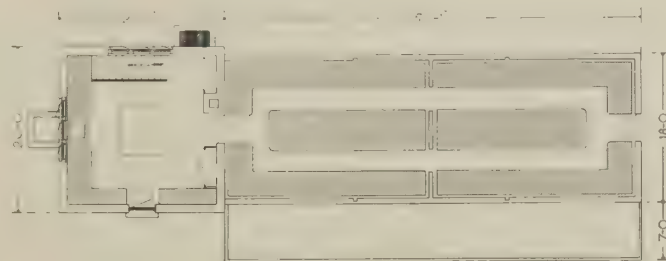




## Foley Greenhouse of Mr. Clyde M. Carr

Lake Forest, Illinois

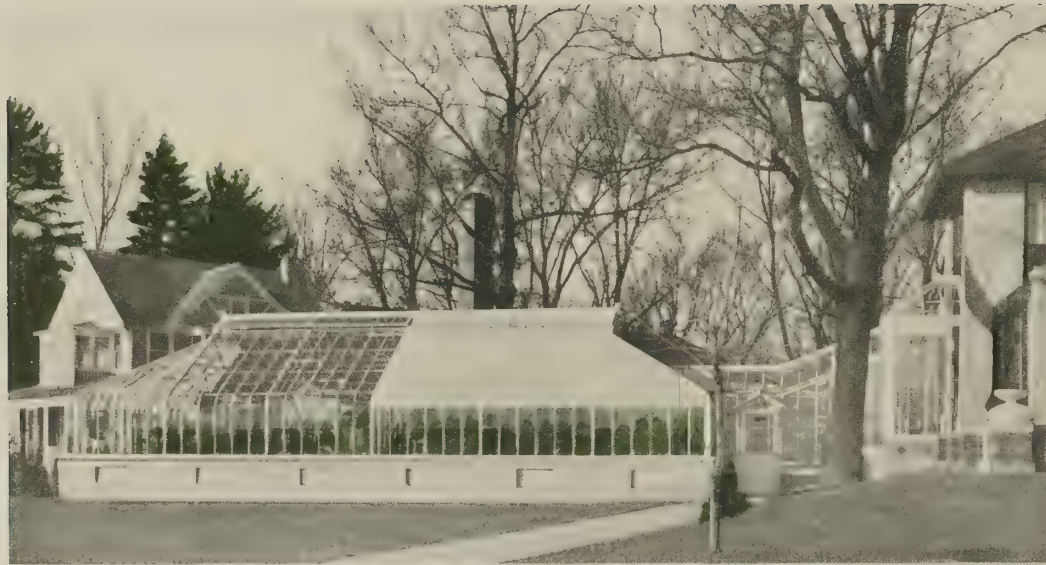
THIS rather unusual curved eave greenhouse was designed and erected by us for Mr. Clyde M. Carr at his new home at Lake Forest. The glass area of this house is greater, in proportion to the roof bars, than in the average house because all panes are 24 inches wide instead of the usual 16 inch. The smaller number of roof bars gives the effect of a much shorter house than it actually is.



In designing a structure with glass as wide as this it is necessary to give special thought to the size, shape and reinforcing of the rafters and supports, for they are a third less roof bars in number than with the smaller glass. With the smaller number of roof bars and greater glass area the danger of breakage through vibration and swaying is increased. Foley construction is probably the best adapted to these severe demands because every member is planned with the greatest factor of safety. In fact, the Foley house has the best reputation for glass conservation.

The shaded portion of this house is used for palms and ferns; the unshaded compartment is reserved for bedding plants almost exclusively. Service building matches residence and other buildings on grounds. Heat is Foley Hot Water System with regulating valves.

Bedding frames in foreground are heated by coils from main plant.

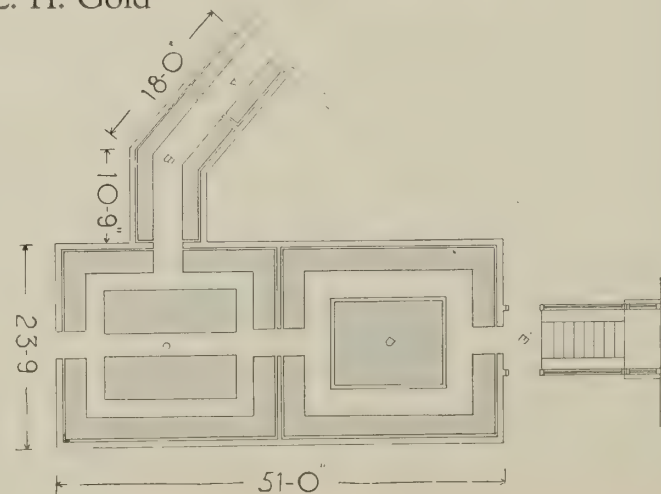


Foley Greenhouse of Mr. E. H. Gold  
Holland, Michigan

THIS charming curved eave house was designed and erected by us for Mr. Gold, at his summer residence on Black Lake, Michigan. Before the erection of this conservatory Mr. Gold shut his delightful home up every fall; but when we built the greenhouse we installed a heating plant capable of warming the residence so that it is now available to him at all times. To make the flower house a part of the home we constructed the glass connecting passage that can be easily taken down in the summer.

And the lure of the flowers often takes Mr. Gold and parties of friends up here for week-ends during the winter, for as he says, "Here is a bit of summer held over to cheer us during the cold weather."

The style of the hipped ends to the roof is decidedly attractive and is very effective in a house that cannot, on account of space, be enlarged. With the two compartments, one of which is shaded for a palm house a good variety of blooms is possible.







## Foley Greenhouse of Mrs. H. K. Wick

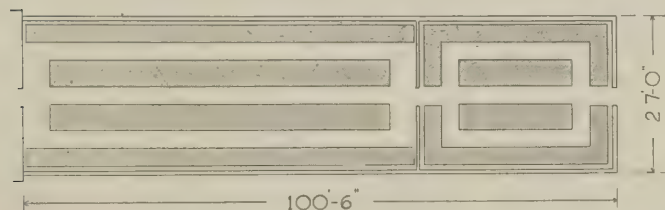
Youngstown, Ohio

THE severe gables of this massive early Victorian type of home suggested the straight lines of the straight eave greenhouse that we erected on this estate. This is an example of making the harmony of the entire grounds complete by the selection of the proper type of greenhouse. And, added to this, is the massive service building of cut stone.

Above the foundation of the greenhouse, which is of cut stone also, is arranged a series of ventilating sash, hinged at

the eave. These are operated, like all Foley ventilators, with our improved self-locking mechanism.

This house is divided into two compartments, one of which, with roof glass shaded, is used as a palm room. The other is devoted entirely to blooming plants for the home.





## Foley Greenhouse of Mr. John Dupee

Coronado, California

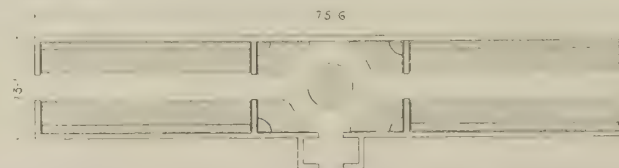
LOCATED in the midst of tropical vegetation, within a stone's throw of the Pacific Ocean, one hundred and fifty miles south of Los Angeles, California, is this charming Foley Greenhouse of Mr. John Dupee. Because of the action of the salt mists from the sea this house is constructed all of wood, yet we have maintained in it the largest degree of glass surface. The special Foley construction is so strong, yet so light, that it gives the fullest amount of sunshine without the usual obstructing shadow-producing supports.

California redwood was chosen for the construction because of its longevity and adaptability to use for wooden greenhouses for which it is especially recommended.

Mr. Dupee has found that, in spite of the very equable

tropical climate, he needs the perfect control of heat and air that is possible in this greenhouse to produce the magnificent orchids for which he is famous.

Mr. Dupee erected this house with his own men after it was constructed complete in the Foley factory. His letters expressing pleasure and gratification over the care and skill shown in the construction are recommendations of great value to greenhouse buyers.



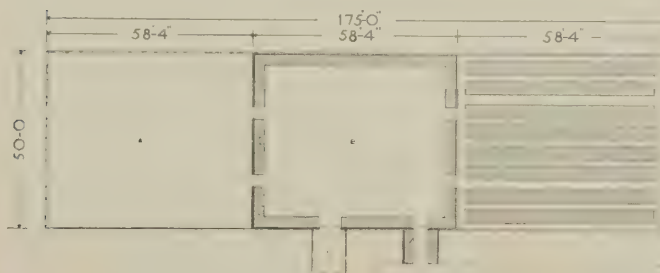




Foley Greenhouse of Mr. J. W. Corrigan  
Cleveland, Ohio

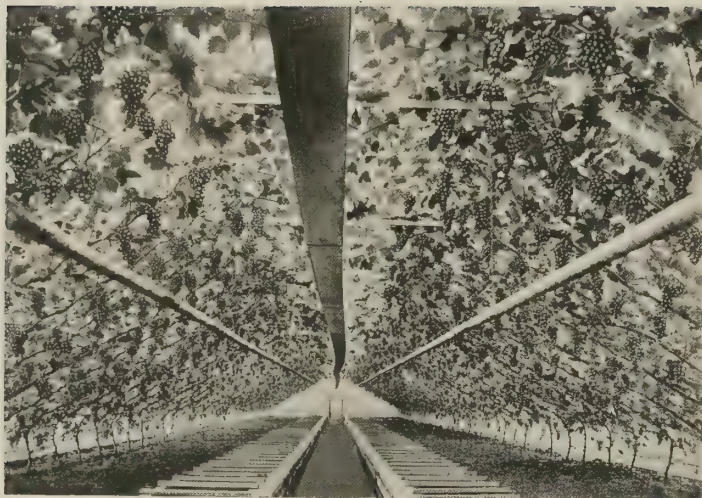
THIS magnificent straight eave house was erected by us for Mr. Corrigan on Nag-ir-roc Farm near Cleveland, Ohio. There are three compartments in this house—the center being used for palms and ferns and the ends almost entirely given over to flowering plants. In the winter all of these buildings are crowded with the plants that, during the summer adorn this delightful formal garden.

Eight rows of benches are easily accommodated in a house as wide as this; giving ample room for a great number of plants.



Heat for these greenhouses comes from a central plant that warms the garages, and servants' quarters.





## Foley Greenhouses of Mr. O. C. Barber

Barberton, Ohio

AMONG the many extensive ranges that we have built for Mr. Barber we show here the interiors of but two. The upper illustration shows his grapery with its very heavy load of fruit. Down the center is a hanging shelf that is filled with pots of strawberry plants so timed that they will bear in mid-winter. In addition to these fruits Mr. Barber has several houses of peaches and nectarines with the usual scattering of semi-tropical fruits as oranges, lemons, etc.

Cucumbers, as shown in the lower picture are far better—of better shape and size, as well as flavor, when grown under glass than when out of doors. And they are to be had at any time the owner desires. These big

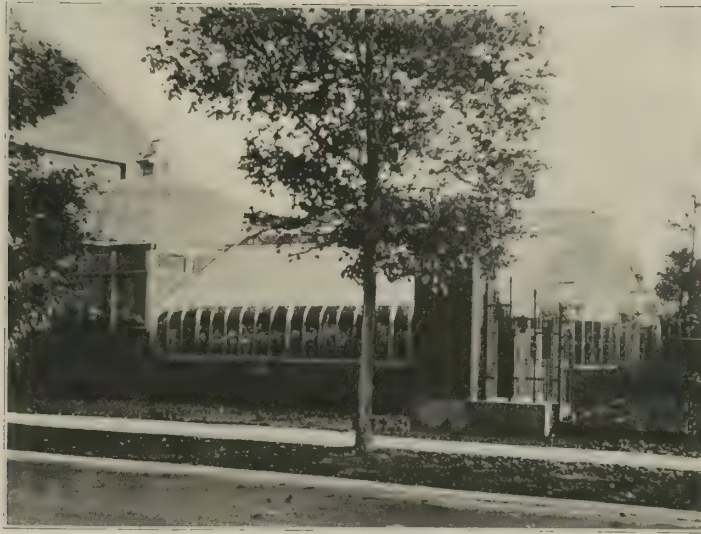
ranges also house great crops of lettuce, radishes, spinach and musk melons that are out of season.

One does not need a greenhouse range as extensive as Mr. Barber's to get an assortment of vegetables. In fact almost any of the houses shown in this book can have part of their space devoted, profitably and pleasurably, to the growing of out of season vegetables for the table. Perhaps it is an entire compartment—perhaps only a bench of lettuce and radishes—but whatever it is you will find it worth while.

When the great weight of the loaded grapevines, entirely supported by the trussed roof arch, is appreciated it can readily be seen how rigid and strong is the Foley construction. Probably there are several tons of fruit on the vines shown. The "pipe-frame" construction shown below is ideally arranged for the wiring necessary for cucumbers or melons.







## Foley Greenhouse of Mr. James Simpson

Glencoe, Illinois

IN THIS charming little conservatory the palm house is of rather unusual design. It is square, with straight sides and a circular dome roof. This gives excellent banking spaces at the sides with a wealth of headroom for the tall palms. The broad curved eave growing house is also devoted almost entirely to palms and ornamental plants.

Entrance to the palm house is through the gardener's cottage, immediately adjoining. Heating plant for both buildings is in the basement of the cottage.

## Foley Greenhouse of Mr. Julius Rosenwald

Chicago, Illinois

THIS straight eave greenhouse, with central palmhouse, was designed and built by us for Mr. Julius Rosenwald some years ago; in fact, before the development of the curved eave houses. Entrance from the residence is directly into one of the wing houses and the palm room opens out into the gardens. Heat is supplied from the same plant that heats the residence. This is another good example of a Foley City Lot Installation.





## Foley Greenhouses — Estate of Mr. E. M. Barton

Hinsdale, Illinois

THIS outlay of straight eave greenhouses was erected by us for the late Mr. Barton on his magnificent dairy farm near Hinsdale, Ill. The two larger buildings are set at right angles and the service building connects the two. For years Mr. Barton used these houses for the growing of fine violets.

One heating plant serves the greenhouses, service building and gardener's cottage adjoining.

## Foley Conservatory Erected for the Late Rt. Rev. Archbishop Quigley

Chicago, Illinois

IN THE grounds of the late Archbishop Quigley was the ruins of an old hexagonal straight roof, wood frame palm house. At the request of the Archbishop we surveyed this foundation and designed this handsome curvilinear roof conservatory to fit.

Since its completion this has been used almost entirely as a palm and fern house, showing only enough blooms to give the needed touches of color.

Service room and heating plant are in the basement, so there is nothing to mar the perfect harmony of this building. It stands like a diamond in the midst of broad green lawns, very striking in the original beauty of its lines.







Foley Conservatory of Mrs. Newell C. Stiles, Chicago, Illinois

### Leanto Conservatories

THE true lover of flowers and plants need not deny himself the pleasure of their care and association even though he has a very small ground space. At a very small expense a cosy little flower room, like these shown, can be added to any home. This is ample to give a generous assortment of plants and will satisfy, in a great measure, the desire for flowers to care for.

Built as an added room to the home, these conservatories are heated from the same heating system at very little extra cost. In the case of Mrs. Newell C. Stiles, whose house is shown above, we added to her home heating equipment. Her residence was heated with a hot air furnace, which was inadequate to properly heat all the rooms under any temperature. So we installed our hot water system in the house and the conservatory so that now, she is heating her home comfortably and the conservatory in addition.

### Sun Rooms and Swimming Pools

THE Foley form of special design makes it easy and economical to construct sun parlors, solariums, glass roofs for promenades, or even to glass in large verandas. The present vogue of outdoor swimming pools on large grounds can be easily attained and the pool kept in service all the year round, by enclosing it in a Foley Sectional House during the winter and removing it, if desired, in the spring. Heat for this is easily arranged, either with a special plant or with a connection to existing boilers.



Foley Sun Room of W. A. Douglas, Oak Park, Illinois



## The City Lot Greenhouse

MANY a flower lover has wished, time and time again, for a broad estate so that he might have the unalloyed pleasure of growing flowers, the year round, under glass. And in not investigating the Foley City Lot Installation he has denied himself, needlessly, many, many hours of joy.

While it's true that as large and as varied an assortment of plants and flowers is not available in these small houses still it is possible to have enough to satisfy almost every one.

There are several of the houses shown in this book that could be conveniently adapted to almost any average city lot. The greenhouses shown on pages eleven, twelve, fourteen, fifteen and seventeen are particularly adaptable to smaller spaces than they are now occupying. Some changes in arrangement and in details might be necessary but the main plans could be retained.

Some more elaborate combination houses are those on pages seven, eighteen and twenty-three. But these take rather more space. The little house of the Culver Military Academy, shown on page twenty-nine, would also make a very charming home flower house on a small lot.

The house shown here can be placed right across the end of a lot, entirely screening the grounds from the rear. This house is divided into three compartments which give a variety of temperatures available for all kinds of plants.

The house below is used in place of a division fence. This makes a delightful view from both the owner's grounds and also the neighbor's. The service building is placed next to the garage so that one heating plant cares for both buildings. This is but a single compartment house; but one advantage of this small house is that the owner can, if he desires, give it his personal care exclusively.

Those places which have a caretaker during the summer should erect greenhouses so that this man can be kept busy during the winter and supply the home with a succession of beautiful blooms as well as decorative plants at all times.

Many a restful hour is spent by the women of the household in "puttering" around the plants in a charming little flower house like those shown.







Part of the Foley Greenhouses Erected for University of Illinois, Champaign, Illinois

## Foley Institutional Greenhouses

PERHAPS it is the fact that the Foley system of design and construction is more adaptable to existing buildings and ground layout; perhaps it is because of the better construction; perhaps it is because we complete our buildings within the contract time; perhaps it is because Foley prices are lower; or maybe it is because of all these that we have been selected to design and erect so many greenhouses for institutions of all kinds. In size these various installations range all the way from the little single compartment house, erected for the Culver Military Academy to the great ranges of the University of Illinois, only part of which is shown above.

In the University of Illinois layout all of the buildings shown are used for class work and as laboratories in the horticulture, floriculture and pomology courses, except the curved eave palm house and the show house immediately adjoining. The agricultural department ranges, in which botany, plant-breeding, entomology and zoology classes are housed are located at some distance from those shown.

The class rooms for the students are seen in the immediate background, behind the greenhouses. Heat for all of the greenhouses is supplied from central steam plants that serve most of the buildings on the campus.

Probably only in the Foley Greenhouses is the ideal heating arrangement found. In the many experiments with different plants and flowers, in the research work for plant diseases, the atmospheric conditions must be maintained with an exactness that never fails. In each compartment the Foley heating arrangement is so complete, so perfectly designed, that all the variety of temperatures can be absolutely set and held at all times.

As an example of the magnificent results secured by the students in these Foley Greenhouses we show, on page two, a photograph of a "mum" display made in the show house that immediately adjoins the palm house. All these beautiful blooms were propagated and grown by the floriculture classes.



Ohio State University, Columbus, Ohio

OHIO STATE UNIVERSITY, located at Columbus, Ohio, also has a very extensive range of Foley Greenhouses, only one of which appears in the photograph here. This curved eave house is shaded and is used both as a palm house and a show house of the work of the classes. A very attractive feature of this structure is the glass vestibule with a curved eave roof to match the main building. Heat for the greenhouses is supplied from the plant in the recitation building at the right.

can be seen the top of the palm house that faces one of the main promenades on the campus. Heat for this group of greenhouses comes from a steam plant in the recitation hall at the rear.

AT AMES, IOWA, the Iowa State College has a very complete group of Foley greenhouses for their classes in the same courses as those at the University of Illinois; but on account of lack of ground space these are condensed into smaller compass. At the left of the illustration



Iowa State College, Ames, Iowa



## St. Mary's Academy

Notre Dame, Indiana

THE curved eave palm house and square eave wing houses erected for St. Mary's Academy at Notre Dame, Indiana, have many features that could well be adapted by private owners. This arrangement of a palm house in the middle, with wing houses, is so economical of space, yet gives so much chance for a great variety of plants because the connecting houses can be divided into two or more compartments. In this installation the



St. Mary's Academy, Notre Dame, Indiana

palm house is unusually large because it is used as a show house. Immediately back of the palm house is the service building that houses the heating plant.



Culver Military Academy, Culver, Indiana

## Culver Military Academy

Culver, Indiana

THE Foley Greenhouse at Culver Military Academy, Culver, Indiana, is placed immediately adjoining the garage so that one heating plant serves both buildings. As there are no botany or floriculture classes here this greenhouse is used only for the growing of decorative plants and flowers. This size and type of house is ideal for the city lot installation for it is compact, yet of ample capacity to satisfy the desire for the care of flowers.



Foley Greenhouse at Eastern Indiana Hospital for the Insane, Richmond, Indiana

THIS long range, consisting of a central palm house and two wing houses is an excellent example of the perfection of Foley construction. Plans and design were made in our drafting room and the entire structure was manufactured in our shop; this was sent in sections, and was erected in its

entirety by the inmates under the direction of the ground's superintendent.

Dr. Smith advises that every part fit so perfectly—was so accurately made—that not a minute's trouble was had in the erection.



Foley Greenhouse at Iowa Institution for Feeble Minded Children, Glenwood, Iowa

THE general arrangement of this greenhouse is the same as that shown on the preceding page. A palm house in the center with two connecting wing houses makes an ideal installation. Modified as this plan can easily be to suit

individual tastes it is difficult to find a better layout. Complete in itself or as the foundation unit for future enlargements the lines and arrangements of these houses leave little to be desired.



# Standard Specifications for Foley Greenhouses

Foley standard greenhouses are of four distinct types: curved eave, curved eave with side sash, curvilinear and straight eave.

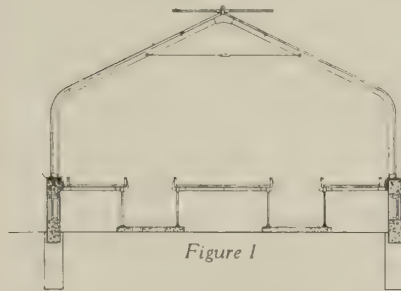


Figure 1

at eave line, giving a continuous support from foundation to ridge. Where side ventilation is desired, it is obtained by placing panels in the masonry wall (figure No. 1). The outstanding advantage of this type of house is that this construction entirely eliminates any shade from the eave line, because the glass is continuous from gutter to ridge.

*Curved eave greenhouse with side sash.* Masonry wall is capped with a cast iron sill. Gutter is located at the spring line with side sash below (detail "B"), which can be opened for ventilation (Figure No. 2). In all other details of construction, house is similar in design to the curved eave house. This construction is generally used where there is need of direct side ventilation.

*Curvilinear roof greenhouse.* Wall is capped with cast iron sill, and gutter is placed at eave line with side sash below, in same construction as house shown in figure No. 2. The roof on this house is in a continuous curve of changing radii from eave line to ridge. This type of construction is specially adapted

In each type the construction is of sectional iron in standard units, being 8 feet 4 inches for 16-in. glass six lights wide and 8 feet 3 inches for 24-in. glass four lights wide.

*Curved Eave Greenhouse.* Masonry wall is capped with a cast iron combination sill and gutter as per detail "A." Roof of greenhouse is supported by steel flat rafters set on edge and bent to radius

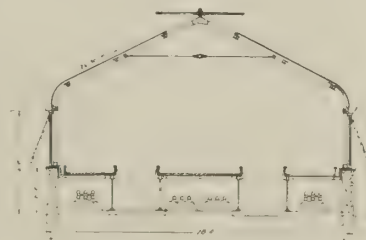


Figure 2

to palm houses and conservatories, aquatic pools and other structures where a great deal of head room is desired (see Fig. No. 3).



Figure 3

*Straight Roof Greenhouse.* Side sash and structure is the same as in Figures Nos. 2 and 3, and where side ventilation is not required stationary glass can be put in. Roof is straight from eave to ridge (see Fig. No. 4).

Foundation wall may be of any material to conform to type and style of other buildings on the grounds. This wall is capped with either cast iron combination

sill and gutter (see Detail "A"), or with plain cast iron sill (see Detail "B"), according to type of superstructure.

## RAFTERS

Roof is supported by means of steel flat rafters attached to the sill and bolted together at the ridge as per details B and C. Angle iron purlins are used to connect rafters and support roof bars. In the curved eave and curvilinear type of construction, roof bars are reinforced with galvanized steel channels the entire length as shown on detail D.

## WOODWORK

Woodwork is made of selected Gulf Red Cypress or California Redwood, thoroughly air-dried, free from all defects, milled smooth and true to detail. All vent sash and doors are blind-mortised.

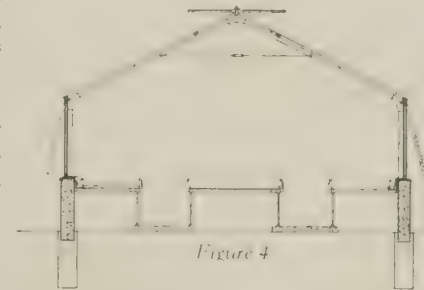
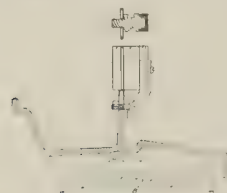


Figure 4

## GLASS

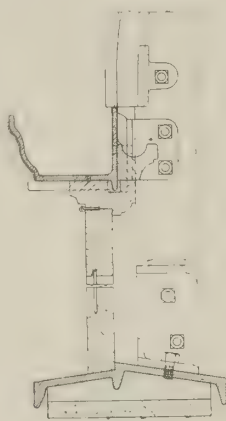
Carefully selected "A" quality double strength glass is used, properly bedded in specially made greenhouse putty, held in place with zinc glazing points.



Detail A

## PAINT

Three coats of the best quality greenhouse paint are used. Iron work receives one coat of metal paint at factory before shipment; second coat is applied after erection. Woodwork receives two coats at the factory. The third or finishing coat is applied to both wood and iron work upon completion after all erection and glazing is complete. Special care is given to covering all exposed putty.



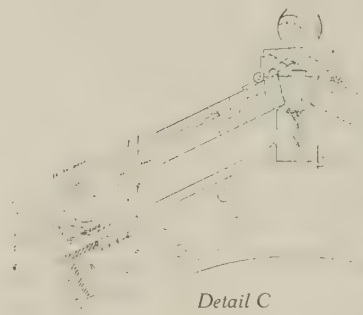
Detail B

## VENTILATION

Ventilation is obtained by vent sash located at the ridge line, side sash as shown in Figures 2, 3 and 4, and by wall panels in the masonry side walls as shown in figure No. 1. All sash are operated by Foley Ventilating Machines which are self-locking at any point so that sash may be opened to the desired angle and remain stationary.

## HEATING

Hot water or steam is used for heating purposes. Heating coils are usually located under the benches and are so distributed as to give uniform temperature throughout the compartment. They are provided with valves to provide regulation of temperature. Cast iron Sectional or Return Tubular Fire Box Boilers are generally used, with mains and returns of ample capacity to take care of coils. All systems are tested for leaks and proper circulation.



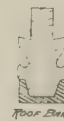
Detail C

## BENCHES AND TABLES

We furnish every type of plant bench or table required with frames made of pipe or galvanized angle iron with pipe legs and sides made of iron, slate or cypress, bottoms made of tile or cypress as desired.



RAFTER CAP



Detail D











